

What is claimed is:

- [Claim 1]** 1. A liquid-proof protective-apparel sleeve, comprising:
- a tubular inner piece of membrane laminated or coated fabric including a stitched seam along its length; and
 - a tubular outer piece of membrane laminated or coated fabric generally surrounding the inner piece, the outer piece including a stitched seam along its length which is circumferentially offset from the seam of the inner piece, the stitched seams being generally free of a seam sealant.
- [Claim 2]** 2. The sleeve of claim 1 wherein the sleeve is Level-4-barrier qualified.
- [Claim 3]** 3. The sleeve of claim 1 wherein the inner piece is connected to the outer piece.
- [Claim 4]** 4. The sleeve of claim 3 wherein the sleeve includes a first end and a second end, and the inner piece is connected to the outer piece at the first end.
- [Claim 5]** 5. The sleeve of claim 4 wherein the first end of the sleeve is a cuff end.
- [Claim 6]** 6. The sleeve of claim 4 wherein the inner piece is connected to the outer piece at the second end.
- [Claim 7]** 7. The sleeve of claim 3 wherein the inner piece is bonded to the outer piece.
- [Claim 8]** 8. The sleeve of claim 1 wherein the inner-piece membrane laminated or coated fabric includes a fabric layer and a membrane layer.
- [Claim 9]** 9. The sleeve of claim 8 wherein the inner piece defines an interior space for receiving at least a portion of a user's arm, the fabric layer of the inner-piece membrane laminated or coated fabric facing the interior space.
- [Claim 10]** 10. The sleeve of claim 1 wherein the outer-piece membrane laminated or coated fabric includes a fabric layer and a membrane layer.

[Claim 11] 11. The sleeve of claim 10 wherein the fabric layer of the outer-piece membrane laminated or coated fabric faces exteriorly of the sleeve.

[Claim 12] 12. The sleeve of claim 1 wherein the inner-piece membrane laminated or coated fabric includes first and second fabric layers and a membrane layer therebetween.

[Claim 13] 13. The sleeve of claim 12 wherein the inner piece defines an interior space for receiving at least a portion of a user's arm, one of the fabric layers of the inner-piece membrane laminated or coated fabric facing the interior space.

[Claim 14] 14. The sleeve of claim 1 wherein the outer-piece membrane laminated or coated fabric includes first and second fabric layers and a membrane layer therebetween.

[Claim 15] 15. The sleeve of claim 14 wherein one of the fabric layers of the outer-piece membrane laminated or coated fabric faces exteriorly of the sleeve.

[Claim 16] 16. The sleeve of claim 1 wherein the inner-piece membrane laminated or coated fabric and the outer-piece membrane laminated or coated fabric each include a first fabric layer and a membrane layer.

[Claim 17] 17. The sleeve of claim 16 wherein the inner and outer pieces define a region therebetween, the membrane layers of the pieces confronting the region.

[Claim 18] 18. The sleeve of claim 17 wherein at least one of the pieces further includes a second fabric layer, the membrane layer being positioned between the first and second fabric layers of the one of the pieces.

[Claim 19] 19. The sleeve of claim 18 wherein the second fabric layer is positioned between the tubular region and the membrane layer.

[Claim 20] 20. The sleeve of claim 8 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 21] 21. The sleeve of claim 10 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 22] 22. The sleeve of claim 16 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 23] 23. The sleeve of claim 8 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 24] 24. The sleeve of claim 10 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 25] 25. The sleeve of claim 16 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 26] 26. The sleeve of claim 1 further including a cuff.

[Claim 27] 27. A liquid-proof protective-apparel garment, comprising:

- a torso section;

- a first liquid-proof sleeve connected to the torso section; and

- a second liquid-proof sleeve connected to the torso section,

the first and second sleeves each comprising:

- a tubular inner piece of membrane laminated or coated fabric including a stitched seam along its length; and

- a tubular outer piece of membrane laminated or coated fabric generally surrounding the inner piece, the outer piece including a stitched seam along its length which is circumferentially offset from the seam of the inner piece, the stitched seams being generally free of a seam sealant.

[Claim 28] 28. The garment of claim 27 wherein the sleeves each include a first end and a second end, the second end of each sleeve being stitched to the torso section.

[Claim 29] 29. The garment of claim 27 wherein the sleeves are Level-4-barrier qualified.

[Claim 30] 30. The garment of claim 27 wherein, for each sleeve, the inner piece is connected to the outer piece.

[Claim 31] 31. The garment of claim 30 wherein the sleeves each include a first end and a second end, and, for each sleeve, the inner piece is connected to the outer piece at the first and second ends.

[Claim 32] 32. The garment of claim 30 wherein, for each sleeve, the inner piece is bonded to the outer piece.

[Claim 33] 33. The garment of claim 27 wherein, for each sleeve, the inner-piece membrane laminated or coated fabric includes a fabric layer and a membrane layer.

[Claim 34] 34. The garment of claim 33 wherein, for each sleeve, the inner piece defines an interior space for receiving at least a portion of a user's arm, the fabric layer of the inner-piece membrane laminated or coated fabric facing the interior space.

[Claim 35] 35. The garment of claim 27 wherein, for each sleeve, the outer-piece membrane laminated or coated fabric includes a fabric layer and a membrane layer.

[Claim 36] 36. The garment of claim 35 wherein, for each sleeve, the fabric layer of the outer-piece membrane laminated or coated fabric faces exteriorly of the sleeve.

[Claim 37] 37. The garment of claim 27 wherein, for each sleeve, the inner-piece membrane laminated or coated fabric includes first and second fabric layers and a membrane layer therebetween.

[Claim 38] 38. The garment of claim 37 wherein, for each sleeve, the inner piece defines an interior space for receiving at least a portion of a user's arm, one of the fabric layers of the inner-piece membrane laminated or coated fabric facing the interior space.

[Claim 39] 39. The garment of claim 27 wherein, for each sleeve, the outer-piece membrane laminated or coated fabric includes first and second fabric layers and a membrane layer therebetween.

[Claim 40] 40. The garment of claim 39 wherein, for each sleeve, one of the fabric layers of the outer-piece membrane laminated or coated fabric faces exteriorly of the sleeve.

[Claim 41] 41. The garment of claim 27 wherein, for each sleeve, the inner-piece membrane laminated or coated fabric and the outer-piece membrane laminated or coated fabric each include a first fabric layer and a membrane layer.

[Claim 42] 42. The garment of claim 41 wherein, for each sleeve, the inner and outer pieces define a tubular region therebetween, the membrane layers of the pieces confronting the tubular region.

[Claim 43] 43. The garment of claim 42 wherein, for each sleeve, at least one of the pieces further includes a second fabric layer, the membrane layer being positioned between the first and second fabric layers of the one of the pieces.

[Claim 44] 44. The garment of claim 43 wherein, for each sleeve, the second fabric layer is positioned between the tubular region and the membrane layer.

[Claim 45] 45. The garment of claim 33 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 46] 46. The garment of claim 35 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 47] 47. The garment of claim 41 wherein the fabric is formed of a material selected from the group consisting of a polyester, a co-polyester, a polypropylene, a nylon, a polyethylene, a cotton, and combinations thereof.

[Claim 48] 48. The garment of claim 33 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 49] 49. The garment of claim 35 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 50] 50. The garment of claim 41 wherein the membrane is formed of a material selected from the group consisting of a polyurethane, a polyester, a nylon, a polyethylene, and combinations thereof.

[Claim 51] 51. The garment of claim 28 further including a cuff connected to the first end of each sleeve.

[Claim 52] 52. A liquid-proof protective-apparel sleeve, comprising:
a tubular inner piece of membrane laminated or coated fabric including a stitched seam along its length; and
a tubular outer piece of membrane laminated or coated fabric generally surrounding the inner piece, the outer piece including a stitched seam along its length which is circumferentially offset from the seam of the inner piece.